ABSTRACT

Drug Utilization Study in Sudden Sensorineural Hearing Loss
(Study at Audiology Unit Dr. Soetomo Teaching Hospital Surabaya)

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Sudden deafness or sudden sensorineural hearing loss is defined as a form of subjective sensation sensorineural hearing loss that take place quickly in 72 hours with audiometric criteria ≥30 dB. Sudden deafness had different therapies adapted to the underlying cause so varied therapeutic modalities such as corticosteroids, vasodilators, neurotrophic and hyperbaric oxygen aimed to obtain a synergistic effect. This study aimed to examine drug utilization including the type, dose, route and frequency of drug administration, and also identify drug related problems (DRP) in patients with sudden deafness. Data was collected with retrospective method in the period January 2012 until December 2015 in Audiology Unit Dr. Soetomo Hospital Surabaya. This study had been reviewed by Ethics Committee of Dr. Soetomo Teaching Hospital.

The results of observational study on 81 patients with sudden deafness showed the main therapy was corticosteroid (96%) while the adjuvant therapies were neurotrophic (88%), vasodilator (89%), other mineral vitamins (26%), piracetam (25%) and hyperbaric oxygen (2%). The most widely used therapies were methylprednisolone po dose of 48 mg once a day from the class of corticosteroid, mecobalamin dose of 500 mcg three times a day as neurotrophic and vasodilator gingko biloba dose of 80 mg twice a day. There were some drug related problems identified such as potential adverse drug reactions like Cushing syndrome (61%), hyperglycemia (46%), peptic ulcer (36%) and potential drug interactions like hyperglycemia (4%), peptic ulcer (2%), hypokalemia (2%).

Based on the description above, drug utilization including the type, dose, route and frequency of drug administration in patients with sudden deafness in Dr. Soetomo Hospital was appropriate based on Sudden Deafness Guideline of Dr. Soetomo Teaching Hospital and some of the existing literature. Monitoring of DRP was needed to avoid potential ADRs and drug interactions.

Keywords: corticosteroid, sudden deafness, sensorineural hearing loss, drug utilization study.